

HOUSE COMMITTEE ON HIGHER EDUCATION

Hearing Date: April 1, 2021 8:00 AM

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COMMENTS FOR: HB 15

Julie Miller, Mrs.

Self, Homemaker

Dallas, TX

At the birth of each baby, we hoped and prayed they would be born healthy. We learned that ten fingers, ten toes, and a normal heartbeat do not necessarily define healthy. At 14 months of age, our child was not developing normally. He did not respond to his name, and he did not playfully engage in interactions. We prayed that he had a hearing problem, but his hearing checked out normal. We hoped he was just experiencing minor delays. At age 2 1/2, he was diagnosed with autism. He was not mentally healthy. He would live his life with this neurological condition. He is now 17.

Perhaps the most shocking thing about an autism diagnosis is that there is no cure. We were told we could try to 'manage' the autism with therapies. The second most shocking thing about autism is that doctors are not totally certain what causes it. Most will say that it is a combination of genetics and environmental triggers, but the triggers cannot be identified with certainty, and may not even be the same for each person who is diagnosed with autism.

We were scared. Early intervention would be critical from age two to eight. Our lifelong journey would begin. Experts said start with private speech therapy at \$135 for 50 minutes. That was the cost 15 years ago. Add occupational therapy and applied behavior analysis. We spent years doing unconventional treatments like chelation, B-12 injections, and even had a hyperbaric oxygen chamber in our house. Fortunately, we had the means to spend thousands of dollars a year to pay for these various therapies and treatments. Our insurance supplemented some expense, but not much. While able to provide these opportunities for our son, it was still a financial burden. It took a toll emotionally and physically. The average family affected by autism often struggles to provide the recommended services because of the exorbitant costs. They must rely on their public school system for a few minutes of therapy per week. This is only the tip of the iceberg to address the behavioral, communication, and social issues usually related to autism.

I believe that one of the most important things to help a family challenged with autism would be to understand what is happening in the brain of their loved one. People with autism view the world differently than a person with typical cognition. Their world is me centered. One of the biggest challenges is understanding facial expressions and body language. Making connections with people is vital. Without this life skill it will be challenging to live an independent adult life. Understanding how and why the brain is wired the way it is in each individual with autism is critical to provide proper supports. We must understand more about the autistic brain. The most current CDC statistics cite 1 in 54 children diagnosed with autism, with a significantly higher incidence in males at 1 in 34.

We strongly support HB 15 and HJR 5. This legislation offers hope to our family and citizens across Texas and the world.

Jason McLellan

self, associate professor

AUSTIN, TX

Chairman Murphy and members,

Thank you for the opportunity to provide information related to House Bill 15 creating the Brain Institute of Texas ("BIT"). I am a structural biologist and serve as a faculty member and researcher in the Department of Molecular Biosciences at The University of Texas at Austin.

Several years ago, UT Austin received a grant from the Cancer Prevention and Research Institute of Texas to partially fund modernization and equipment for the Sauer Structural Biology Laboratory, a new state-of-the-art cryo-electron microscopy

facility on campus. Cancer researchers use this technology, called cryo-EM, to see in high resolution and exquisite detail the structures and processes within cells that contribute to cancer's spread. Infectious disease researchers like me use the same technology to develop a better understanding of viruses and the proteins on their surface that contribute to infection and, increasingly, can be used in the development of vaccines.

The ability to access cryo-EM technology for use in my research on respiratory viruses, including coronaviruses, was part of what attracted me to join UT Austin as a faculty member in 2018 and to bring talented postdoctoral scientists and graduate students from my team to Texas with me. When SARS-CoV-2 rapidly began crossing the globe in early 2020, my team was able to use the facility on the UT Austin campus to create the first 3D atomic-level map of the virus, which we shared with scientists around the world seeking to understand, curb the spread of and treat the virus. Our team, in partnership with our collaborators at the National Institutes of Health, developed the stabilized spike protein now used as an antigen in many leading SARS-CoV-2 vaccines, including all three that have received the FDA's emergency use authorization in the United States. With other University of Texas scientists, we continued to use the facility for research, including in more recent work to further stabilize the spike protein for use in future versions of coronavirus vaccines.

This investment in foundational research through CPRIT has had a tremendous impact beyond just cancer research, as evidenced by the scientific breakthroughs made by my team that directly contributed to combatting the pandemic. Creating the Brain Institute of Texas has the potential to similarly impact neurological and brain health research in Texas by expanding opportunities to attract talented faculty and graduate students who can help make our state a leader in this field. As CPRIT has done, creating the BIT would provide additional opportunities for Texas researchers to access the technological infrastructure needed to make scientific advancements and perhaps even address the next global challenge.

Thank you,
Dr. Jason McLellan

Jessica Schleifer
Teaching Hospitals of Texas
Austin, TX

Registering in support of HB 15.
